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U.S. DEPARTMENT OF AGRICULTURE

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Cotton Fiber and Processing Test Results

CROP of

1976



Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38122 November 5, 1976

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1976

Discussion of Test Results

The average fiber length of short staple cotton tested from the Southwest through October 29 is shorter and less uniform than a year ago, according to the Cotton Division, Agricultural Marketing Service, USDA. The average fiber strength is weaker on both zero and 1/8" gage tests. Picker and card waste is higher than a year ago. Yarns spun from these samples show considerably weaker yarn strength and lower appearance grades. Yarn imperfections are higher. The average spinning potential yarn number is lower.

The U. S. average length of medium staple samples is slightly shorter than a year ago at this time. Micronaire and fiber strength are about the same as a year ago. Picker and card waste is higher than last year. Yarns spun from these samples are stronger with higher appearance grades and fewer imperfections.

Southeastern area medium staple samples are slightly longer, more uniform, and coarser than a year ago. Cottons are stronger. Shirley Analyzer nonlint content is slightly higher. Picker and card waste is considerably higher than last season. Yarns spun from these samples show stronger skein strength and higher appearance grades. Yarn imperfections are fewer. The average spinning potential yarn number is higher.

Medium staple samples tested from the South Central area show fibers to be slightly shorter and less uniform than a year ago. Cottons are finer and stronger. Picker and card waste is higher than last year. Yarns spun from these samples show stronger yarn strength and fewer imperfections.

Medium staple samples tested from the Southwest show slightly shorter fibers than a year ago. Picker and card waste is considerably higher. Yarns spun from these samples are slightly stronger with fewer imperfections.

Medium staple samples tested from the West to date show longer, slightly less uniform fibers than a year ago. Samples are weaker at zero gage strength tests. Both Shirley Analyzer nonlint content and picker and card waste are higher than a year ago. Yarns spun from these samples show higher appearance grades and fewer imperfections. The average spinning potential yarn number is higher.

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These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.^{1/} These reports are available on request from the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN 38122.

^{1/} Summary of Cotton Fiber and Processing Test Results, Crop of 1975, USDA, AMS, Cotton Division, May 1976.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States
through October 29, 1976

Staple group Area, and Crop year	Lots tested	Fiber test results						Processing test results							
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality		Spin. Potent.				
		2.5% span	50/2.5 unif.		Pct.	Rdg.			Mpsi	G/tex		Pct.	Skein str.	Appear- ance	Imperf- actions
				Inches			Pct.	Index			No.				
Short Staple: Southwest 1975 1976	12	1.01	46		4.4	89	22	3.0	5.7	104	116	11	46		
	7	.98	44		4.4	85	20	2.9	6.9	84	111	13	36		
Medium Staple: Southeast 1975 1976	3	1.09	45		4.3	81	22	3.4	5.5	100	100	25	56		
	4	1.10	46		4.8	88	24	3.6	6.7	112	105	23	60		
South Central 1975 1976	32	1.10	46		4.6	86	23	3.0	5.1	101	100	20	57		
	15	1.09	45		4.3	89	24	2.9	5.7	112	101	18	55		
Southwest 1975 1976	21	1.08	45		4.3	81	22	2.9	4.7	103	99	22	58		
	23	1.07	45		4.2	81	22	3.0	6.1	105	99	20	58		
West 1975 1976	5	1.12	46		4.0	95	28	2.0	4.1	129	84	31	73		
	2	1.14	45		4.1	90	28	2.8	5.2	129	90	20	76		
U.S. Average 1975 1976	61	1.10	45		4.4	85	23	2.9	4.9	104	98	22	59		
	44	1.08	45		4.3	85	23	3.0	5.9	109	100	19	58		
Significant dif- ference 2/		0.02	2		0.2	2	1	0.5	0.5	4(22s)	5	2	3		

Based on a limited number of samples of modal quality

Minimum differences considered to be significant for comparisons in this table.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through October 29, 1976 1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results										SPY
		Length		Mike	Strength		SA Non- lint	P&C Waste	Comber Waste	Yarn Quality					Imprfctns			
					Zero	1/8"				Strength carded	combed	carded	combed	card			comb	
		Span	Unif															
No.	In.	Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.	Pct.	Lbs.	Lbs.	Indx	Indx	No.	No.	No.			
22s Carded & Combed Yarn																		
Long Staple: Southeast 1975 1976	1	1.15	45	4.1	83	24	2.9	7.7	15.5	106	125	120	120	14	8	71		
	2	1.18	47	4.4	91	26	2.3	5.8	14.4	126	146	105	125	21	9	76		
Significant Difference 2/		0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	5	4(22s)	5	2	2	3		

1/ Based on a limited number of samples of modal quality
 2/ Minimum differences considered to be significant for comparisons in this table.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification				Fiber Test Results										Processing Test Results - Carded Yarns									
Sample Number				Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent'ial
No	Grade	Name & Code	Stple 32s	2.5% span	Unif		Zero Gage	1/8" Gage		Pct	Pct	Gra	Yel		8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	
				In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No
SOUTHWEST AREA																							
CENTRAL TEXAS																							
TEMPLE																							
1	SLM LT SP	42	32	0.95	47	4.8	89	21	5.8	2.2	3	4	4	6.7	255	80	5.7	4.8	120	110	21	15	31
2	SLM LT SP	42	31	0.93	45	4.6	87	20	5.9	3.3	3	4	4	6.9	262	81	6.0	5.1	130	120	20	12	33
3	SLM LT SP	42	31	0.97	44	4.6	87	21	5.8	2.6	3	4	4	6.3	264	78	5.9	4.8	130	100	17	14	31
WACO																							
1	LP LT SP	52	1/33	1.08	43	3.8	82	21	6.4	3.8	4	4	4	6.8	297	97	7.2	5.9	130	110	22	17	49

1/ Reduced from 42 because of bark

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1976--(Continued)

Production Area, Classification & Sample Number				Fiber Test Results						Processing Test Results - Carded Yarns														
No	Grade	Style	32s	In	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8" Pct	S.A. Non-Lint Pct		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potent'ial
					2.5% span	Unif.		Mpsi	G/tex		Pct	Pct	No	Yel		Lbs	Pct	Lbs	Pct	No	No	22s or 27 tx	50s or 12 tx	
SOUTH CENTRAL AREA--(Continued)																								
MISSISSIPPI--(Continued)																								
HOLLANDALE																								
1	SLM	41	34	1.09	42	3.5	88	25	7.3	DELTA PINE 16	3.4	1	2	5.8	115	100 PERCENT	37	6.2	4.5	90	70	26	18	63
INDIANOLA																								
1	LM	51	33	1.03	45	4.0	98	24	5.1	DIXIE KING III	4.2	3	2	6.9	106	100 PERCENT	35	5.2	3.8	110	70	15	10	52
INDIANOLA																								
1	LM PLUS	50	34	1.04	47	4.3	93	25	6.0	STONEVILLE 213	3.7	2	3	6.7	114	100 PERCENT	37	5.7	4.3	110	90	14	10	58
NATCHEZ																								
1	SLM	41	34	1.07	45	4.3	87	23	6.0	STONEVILLE 213	2.5	1	2	5.7	105	85 PERCENT	32	6.0	4.3	100	80	17	12	54
SCOTT																								
1	SLM	41	34	1.10	45	4.4	91	26	7.4	DELTA PINE 61	2.0	1	2	4.1	121	100 PERCENT	41	6.4	4.7	110	90	11	9	72
MISSOURI																								
1	SENATH	41	35	1.10	44	3.8	86	24	6.7	AUBURN M	2.8	2	3	5.2	119	100 PERCENT	39	6.5	4.4	90	80	24	17	62
SOUTHWEST AREA																								
CENTRAL TEXAS																								
3	SLM LT SP	42	34	1.10	46	4.4	81	22	7.1	STONEVILLE 213	2.5	2	3	6.1	101	90 PERCENT	32	6.1	4.4	100	70	24	16	54
WEST AREA																								
CALIFORNIA																								
1	SLM	41	36	1.13	45	4.0	88	27	6.7	ACALA SJ-2	3.3	1	3	5.5	125	99 PERCENT	44	5.7	4.7	90	70	22	19	74
BAKERSFIELD																								
1	SLM	41	36	1.14	45	4.2	93	29	6.3	ACALA SJ-2	2.4	2	2	4.8	133	90 PERCENT	48	5.6	4.7	90	80	21	17	77

Table 4 --Cotton, American upland long staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
No	Grade	Style	Name & Code	Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C and Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Potential	
				2.5% span	Unif.		Zero Gage	1/8" Gage			Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx				
				32s			In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No

SOUTHEAST

AREA

NORTH CAROLINA

DUNN

41	36	1.18	48	4.6	92	27	6.6	1.8	2	3	5.7	100 PERCENT	127	46	5.8	4.6	110	100	14	10	77
1	SLM									*	13.6		148	53	6.5	5.2	130	110	6	3	

SOUTH CAROLINA

HARTSVILLE

41	36	1.19	46	4.3	90	26	6.6	2.8	1	3	5.9	100 PERCENT	125	44	5.9	4.6	100	80	28	17	75
1	SLM									*	15.3		144	52	6.3	4.9	120	100	12	11	

* Comber Waste and Combed Yarn Data